



North Carolina Department of Environment and Natural Resources

Dexter Matthews, Director

Division of Waste Management

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

July 28, 2011

Sent Via Email – YIY1@RJRT.com

Ms. Yongsheng (Yong) Yi
R.J. Reynolds Tobacco Company
Environment, Health, and Safety
401 North Main St.
Winston-Salem, NC 27101

Re: *Off-Site Access and Groundwater Modeling*
R.J. Reynolds Rural Hall Ash Landfill
Forsyth County, Solid Waste Permit Number 34-05

Dear Ms. Yongsheng (Yong) Yi:

The Solid Waste Section has completed a review of the *Off-Site Access and Groundwater Modeling* letter dated July 6, 2011 (Doc ID 14344) and submitted on behalf of R.J. Reynolds Tobacco Company by ERM NC, PC. The *Off-Site Access and Groundwater Modeling* letter was submitted as a follow up correspondence to the June 10, 2011 letter.

Within the *Off-Site Access and Groundwater Modeling* letter, documentation regarding the attempts to obtain permission to install an off-site groundwater monitoring well was provided. In addition, an analytic element groundwater model (MODAEM) will be utilized to simulate groundwater flow and contaminant transport near the landfill area, including the watershed east and northeast of the landfill. MODAEM is defined by analytic elements representing line sources and sinks such as rivers and drains or specified head and specified flow boundaries. Wells are also represented as points, and recharge and aquifer properties can be defined on polygons. MODAEM then formulates a set of equations based on these entities and the equations can be solved for any location in the horizontal plane.

As a result, the *Off-Site Access and Groundwater Modeling* letter is approved as described. If you have any questions or concerns regarding this letter, please contact me at 919-508-8500 or by email at jaclynne.drummond@ncdenr.gov. Thank you for your continued cooperation with this matter.

Sincerely,

Jaclynne Drummond
Compliance Hydrogeologist
Solid Waste Section

cc sent via email:

Max Hopkins, R.J. Reynolds
Nancy Scott, Assistant NC Attorney General
Lori Hinnant, Womble Carlyle Sandridge & Rice, PLLC
Michael Scott, Solid Waste Section Chief
Mark Poindexter, Field Operations Supervisor
Jason Watkins, Western District Supervisor
C.T. Gerstell, Environmental Senior Specialist